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## THE LESSER PRAIRIE CHICKEN'S INFLATABLE NECK SACS

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In the fall of 1932, in the vicinity of Arnett, Ellis County, western Oklahoma, I first saw and handled the Lesser Prairie Chicken (*Tympanuchus pallidicinctus*). The species was common at that time in the "shinnery oak" country thereabouts, especially on the Davison Ranch a few kilometers southeast of the city (Sutton, Ann. Carnegie Mus., 24:11-12, 1934). A detailed watercolor sketch that I made of the head and foot of an adult male bird shot that year on 6 October shows the neck sac to be light cinnamon-buff, a color that contrasted sharply with the bright, slightly ochraceous orange-yellow of the comb above the eye.

Noting that Florence M. Bailey (Birds of New Mexico, New Mexico Dept. of Fish and Game, Santa Fe, 1928:207) described the neck sacs as "yellow in the breeding season," I fell to believing that the sacs brightened to yellow in spring and summer and reverted to cinnamon-buff (or some such comparatively dull shade) in fall and winter. When, in 1936, I spent about 6 weeks at Arnett (early May to mid-June), I observed Lesser Prairie Chickens almost daily, for in certain parts of the "shinnery country" thereabouts they were common. Repeatedly I made a point of driving to one or more "gobbling grounds," where I observed the performing males at remarkably close range from my car. Convinced that the neck sacs were not at all yellow, I made a point of collecting 2 males early in the day on 25 May and drawing them in detail before the colors of the fleshy parts had had a chance to fade. In each of these drawings the neck sac is light, somewhat reddish brown, again in sharp contrast to the bright orange-yellow of the comb above the eye. I made a third detailed sketch of an adult male bird later that summer but did not record the date.

To my surprise I found that authors continued to describe the color of the neck sacs inadequately. Friedmann (*in* Ridgway, U.S. Natl. Mus. Bull. 50, Pt. IX, 1941:220), who may have been following Bailey (*supra*), stated

that the "gular sacs" were "yellow in the breeding season." Ligon, in "New Mexico Birds and Where to Find Them" (Univ. New Mexico Press, Albuquerque, 1961:89), called the sacs "orange-colored." Peterson, in his "Field Guide to the Birds of Texas" (Houghton Mifflin Co., Boston, 1960:74), came much closer to accuracy when he described the sacs as "dull red rather than orange," though I continue to feel that *red* is the wrong word. Robbins, Bruun, and Zim, in their "A Guide to Field Identification Birds of North America" (Golden Press, N.Y., 1966:86), described the sacs as "reddish," but the illustration on the opposite page is hopelessly misleading since the color shown there approaches pale lilac or violet. I suspect that Arthur Singer, whose excellent drawings illustrate this work, was advised to make clear that the color of the neck sac was very different from that in the Greater Prairie Chicken (*T. cupido*), and he may have heard or assumed that the proper color was close to that of the neck sac of the Sharp-tailed Grouse (*Pedioecetes phasianellus*).

In any event, now that I have been observing the Lesser Prairie Chicken off and on for 45 years, I am convinced that its neck sacs are never yellow or purple at any season; nor are they orange, the color-word that best describes the sacs of the Greater Prairie Chicken. I would call them *tan*, were not that word so widely used commercially for a variety of shades. The accompanying colorplate, which is based on photographs taken by my friend and former student, Keith Giezentanner, now Development Supervisor for the New Mexico Department of Game and Fish at Santa Fe, shows the color of the inflated air sacs admirably. The photographs were taken on the morning of 26 April 1975 at a well established booming ground 13 km east of Milnesand, Roosevelt County, southeastern New Mexico.

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